

Claims

1. A battery-powered handpiece, comprising:
5 a first charging contact connectable to a first contact of a battery; and
means for allowing charging current to flow from said first charging contact into
said battery but preventing current flow in the opposite direction.
2. The battery-powered handpiece according to claim 1, wherein said means for
10 allowing charging current to flow from said first charging contact into said battery but
prevent current flow in the opposite direction, is a diode located between said first
charging contact and said first contact of a battery.
3. The battery-powered handpiece according to claim 1, further comprising a second
15 charging contact connectable to a second contact of said battery.
4. The battery-powered handpiece according to claim 3, further comprising a sensing
contact arranged in the path of potential electrolytic current flow between said first
charging contact and said second charging contact.
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5. The battery-powered handpiece of claim 1 wherein said handpiece is a dental cure
light.
6. A battery-powered handpiece, comprising:
25 a first charging contact connectable to a first contact of a battery;
a second charging contact connectable to a second contact of said battery; and
a sensing contact arranged in the path of potential electrolytic current flow between
said first charging contact and said second charging contact.
- 30 7. The battery-powered handpiece according to claim 6, further comprising a diode
located between said first charging contact and said battery.
8. The battery-powered handpiece of claim 6 wherein said handpiece is a dental cure
light.
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9. A charger device for a battery-powered handpiece, comprising a detector for
detecting the presence or absence of said battery-powered handpiece and a switch for

switching on or off the charging voltage dependent on detection of the presence or absence of said handpiece.

10. The charger device according to claim 9, wherein said switch is selected from the group consisting of mechanical switches, optical switches, electro-mechanical switches, electro-optical switches or magnetic switching means.

11. The charger device according to claim 9, further comprising a first charging pin and a second charging pin, said switch allowing a charging voltage to be applied to said charging pins in the presence of said handpiece.

12. The charger device according to claim 11, further comprising a sensing pin arranged in the path of potential electrolytic current flow between said first charging pin and said second charging pin.

13. A charger device for a battery-powered handpiece, comprising:
a first charging pin;
a second charging pin; and
a sensing pin arranged in the path of potential electrolytic current flow between said first charging pin and said second charging pin.

14. The charger device according to claim 13, said sensing pin detecting electrolytic current flow between said first and second charging pins.

15. The charger device according to claim 14, further comprising a warning means for giving a warning signal if electrolytic current flow between said first and second charging pins is sensed by said sensing pin.

16. A device comprising a battery-powered handpiece and a charger device for a battery-powered handpiece wherein:

- a) said battery-powered handpiece comprises a first charging contact connectable to a first contact of a battery, and means for allowing charging current to flow from said first charging contact into said battery, but preventing current flow in the opposite direction; and
- b) said charger device for a battery-powered handpiece comprises a detector for detecting the presence or absence of said battery-powered handpiece, and a

switch for switching off or on the charging voltage dependent on detection of the presence or absence of the handpiece.

17. The device according to claim 16, wherein said means for allowing charging
5 current to flow from said first charging contact into said battery but prevent current flow in the opposite direction, is a diode located between said first charging contact and said first contact of a battery.

18. The device according to claim 16, wherein said battery-powered handpiece
10 comprises a second charging contact connectable to a second contact of said battery.

19. The device according to claim 18, wherein said battery-powered handpiece further
comprises a sensing contact arranged in the path of potential electrolytic current flow
between said first charging contact and said second charging contact.

20. The device according to claim 16, wherein said charger device switch is selected
15 from the group consisting of mechanical switches, optical switches, electro-mechanical switches, electro-optical switches or magnetic switching means.

21. The device according to claim 16, wherein said charger device further comprises a
20 first charging pin and a second charging pin, and said switch allows a charging voltage to be applied to said charging pins in the presence of said handpiece.

22. The device according to claim 21, wherein said charger device further comprises a
25 sensing pin arranged in the path of potential electrolytic current flow between said first charging pin and said second charging pin.

23. The device according to claim 16, wherein the battery-powered handpiece further
comprises a magnetic means, that cooperates with a magnetically activatable switch
30 arranged in the charger device, to initiate a charging operation once the battery-powered handpiece is electrically connected to said charger device.

24. The device of claim 23, wherein said magnetic means is a magnet arranged in
proximity to the housing of the handpiece.

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25. The device of claim 23, wherein the magnetic switching means comprises a magnetically activatable switch that is operable in response to a magnetic means arranged in said handpiece.
- 5 26. The device of claim 25, wherein said magnetically activatable switch comprises a Reed switch.
27. A device comprising a battery-powered handpiece and a charger device for a battery-powered handpiece comprising:
- 10 a) a battery-powered handpiece comprising: a first charging contact connectable to a first contact of a battery; a second charging contact connectable to a second contact of said battery; and a sensing contact arranged in the path of potential electrolytic current flow between said first charging contact and said second charging contact.
- 15 b) a charger device for a battery-powered handpiece comprising: a first charging pin; a second charging pin; and a sensing pin arranged in the path of potential electrolytic current flow between said first charging pin and said second charging pin.
- 20 28. The device according to claim 27, further comprising a warning means for giving a warning signal if electrolytic current flows between said first and second charging pins is sensed by said sensing pin.
- 25 29. The device according to claim 27, wherein said battery-powered handpiece further comprises a magnetic means, that cooperates with a magnetically activatable switch arranged in the charger device, to initiate a charging operation once the battery-powered handpiece is electrically connected to said charger device.
- 30 30. The device according to claim 29, wherein said magnetic means is a magnet arranged in proximity to the housing of the handpiece.
31. The device of claim 29, wherein said magnetically activatable switch comprises a Reed switch.

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